



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,902	09/29/2003	Igor D.D Curcio	915-010.006	4828
4955 7590 05/12/2009 WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP BRADFORD GREEN, BUILDING 5 755 MAIN STREET, P O BOX 224 MONROE, CT 06468				
EXAMINER				
CASCA, FRED A				
ART UNIT		PAPER NUMBER		
2617				
MAIL DATE		DELIVERY MODE		
05/12/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/674,902

**Applicant(s)**

CURCIO ET AL.

**Examiner**

FRED A. CASCA

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 8-12 and 14-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-12 and 14-33 is/are rejected.
- 7) ☒ Claim(s) 1-6, 8-12 and 14-33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Paper No(s)/Mail Date \_\_\_\_\_
- 6) ☐ Other: \_\_\_\_\_

#### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed March 2, 2009 has been entered.

#### ***Allowable Subject Matter***

2. The allowability of previously objected claims 13 and 34-38 is withdrawn. Although examiner had objected to claims 13 and 34-38 for comprising allowable subject matter, claims are always subject to further search and consideration. The IDS provided by applicant (WO 02/45372) discloses the previous allowable subject matter of previously objected claims 13 and 34-38.

#### ***Objected Claims***

3. Claims 8 and 9 are objected to because they depend on cancelled claim 7. Correction is required.

4. Claims 1-6, 8-12, 14-33 are objected to because it includes the phrase, "such as" in independent claims 1 and 21-25. Correction can be made by removing the phrase "such as" in the aforementioned claims.

#### ***Claim Rejections - 35 USC § 112***

Art Unit: 2617

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-6, 8-12, 14-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claim 1, line 7, refers to "the streaming media." It is not clear if the "the steaming media" of line 7 refers to "steaming media" of line 2 or to "streaming media" of line 6. The claim language with reference to the streaming media renders claim 1 vague and indefinite because it is not positively clear which streaming media the streaming media of line 7 refers to. Examiner suggests to define "streaming media" of line 2 as "a first streaming media" and "steaming media" of line 6 as "s second steaming media" and address "the streaming media" of line 7 according to one the above streaming medias. Independent claims 21, 22, 23, 24 and 25 have the indefiniteness issues as that of claim 1.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-6, 8-12, 14-18 and 21-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apostolopoulos et al (US 2003/0009576 A1) in view of Leighton et al (US 2003/0200326 A1) and further in view of Walker (WO 02/45372 A2).

Referring to claim 1, Apostolopoulos discloses a method (abstract) comprising:  
receiving streaming media in a client device from a streaming server over an air interface (paragraphs 2 and 9, "streaming media to fixed clients and /or mobile clients"),  
detecting a cell reselection event in the mobile client device (paragraph 10, "handoff", "detects that a mobile client enters the service region of a base station"), and  
in response to the detected cell reselection event, requesting the streaming server to send streaming media which the mobile client device is not able to receive due to the cell reselection (Par. 57, 66, 67, 80, "When the video sequence media stream is requested, for example, by cell phone).

Apostolopoulos does not specifically disclose requesting is an application level request, and wherein the streaming media is temporarily stored in a temporary store, such as a buffer, at the client device before playing.

However, application level requests (e.g., via RTCP) are conventional in the art of communication, as Leighton discloses an application level request by using RTSP (Real Time Streaming Protocol) for providing a complete streaming service (paragraph 26, "RTSP is an application-level protocol", "RTSP, the Real Time Streaming Protocol, is a client-server multimedia presentation protocol to enable controlled delivery of streamed multimedia"). An advantage of application level request is to assist the applications running on the source and

Art Unit: 2617

destination terminals to establish an application level connection, thus, providing user with control.

Leighton further discloses the streaming media is temporarily stored in a temporary store such as a buffer, at the client device before playing (Leighton, paragraph 5 and 26, "buffering").

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Apostolopoulos by incorporating the teachings of Leighton in the format claimed by applicant, for the purpose of allowing an application level connection and thus providing control and convenience to the user.

Apostolopoulos does not specifically disclose wherein a degree of fullness of the temporary store decreases during the cell reselection, and the streaming server is requested to send the not received streaming media although the temporary store has not become totally empty, and said requesting is performed without pausing playback at the mobile client device, in the format claimed.

Walker discloses that degree of fullness of a buffer where the rate of transmission is reduced to equal the rate of consumption by the viewing means which will bring the quantity of data in the buffer to an equilibrium (page. 3, lines 5-20).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the above combination in the format claimed for the purpose of providing an efficient communication system.

Referring to claim 2, the combination of Apostolopoulos/Leighton/Waker disclose the method according to claim 1, and further disclose the streaming server is provided with a starting

point at which to start sending the requested streaming media (Apostolopoulos, paragraph 10, 141-145, 147, 150 and 155).

Referring to claim 3, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 1, and further disclose the streaming server sends the streaming media which the mobile client device is not able to receive due to said cell reselection as well as a remaining portion of streaming media in response to the request (Apostolopoulos, paragraph 10, 141-145, 147, 150 and 155).

Referring to claim 4, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 1, and further disclose the cell reselection comprises a cell reselection period during which the mobile client device is not able to receive streaming media (Apostolopoulos, paragraph 10, 141-145, 147, 150 and 155), the method further comprising sending from the mobile client device to the streaming server, after the cell reselection period, a resending request which requests the streaming server to resend streaming media which the mobile client device was not able to receive during the cell reselection period (Leighton, paragraph 26) .

Referring to claim 5, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 4, and further disclose the resending request is generated according to Real Time Streaming Protocol (Leighton, paragraph 26, "RTSP").

Referring to claim 6, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 4, and further disclose the resending request is implemented by a Real Time Streaming Protocol PAUSE/PLAY message pair (Leighton, paragraph 26).

Referring to claim 8, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 1, and inherently disclose the temporary store has a size longer in time than a cell reselection period (Leighton, paragraph 5 and 26, and Apostolopoulos, figures 9-11 and paragraph 10, 141-145, 147, 150 and 155).

Referring to claim 9, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 1, and inherently disclose the streaming server is requested to send streaming media at a rate higher than the playing rate of that media so as to increase a degree of fullness of the temporary store (Leighton, paragraph 5 and 26, and Apostolopoulos, figures 9-11 and paragraph 10, 141-145, 147, 150 and 155)

Referring to claim 10, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 9, and further disclose a bandwidth or desired transmission bit rate with speeding factor is communicated to the streaming server in a request (Leighton, paragraph 26).

Referring to claim 11, the combination of Apostolopoulos/Leighton/Walker discloses the method according to claim 9, and further disclose the streaming media is stored at the mobile client device at a rate higher than the playing rate.

Referring to claim 12, the combination of Apostolopoulos/Leighton/Walker discloses the method according to claim 9, and further disclose the streaming server is subsequently requested to resume an original configuration (Leighton, paragraph 26).

Referring to claim 14, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 1, and further disclose the streaming server has a set of media streams available for transmission in which the same media content has been encoded at



different bit rates (Leighton, paragraph 5 and 26, and Apostolopoulos, figures 9-11 and paragraph 10, 141-145, 147, 150 and 155).

Referring to claim 15, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 14, and further disclose information on the available set of media streams is beforehand communicated to the mobile client device in a streaming session setup (Leighton, paragraph 5 and 26, and Apostolopoulos, figures 9-11 and paragraph 10, 141-145, 147, 150 and 155).

Referring to claim 16, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 14, and inherently disclose the streaming server is requested to switch from sending a higher bit rate media stream to sending a lower bit rate media stream at an increased speed (Leighton, paragraph 23).

Referring to claim 17, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 1, and further disclose the streaming media comprise one of the following: a video stream, an audio stream, another stream of single media, a multimedia stream (Leighton, paragraph 5, 23 and 26, and Apostolopoulos, figures 9-11 and paragraph 10, 141-145, 147, 150 and 155).

Referring to claim 18, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 1, and further disclose the streaming server sends streaming media to the mobile client device via a mobile communications network (paragraphs 2 and 9).

Referring to claims 21-25, claims 21, 22, 23, 24 and 25 defines a mobile client device, a streaming server, a system and computer programs reciting features analogous to the features of the method defined by claim 1 (as rejected above). Thus, the combinations of

Art Unit: 2617

Apostolopoulos/Leighton/Walker disclose all elements of claims 21-25 (please see the rejection of claim 1 above).

Referring to claims 26-31, claims 26-31 defines a mobile client device, a streaming server, and a system reciting features analogous to the features of the method defined by claims, 4, 5, 7, 9 and 9 (as rejected above) respectively. Thus, the combinations of Apostolopoulos/Leighton/Walker disclose all elements of claims 26-31 (please see the rejection of claims 4, 5, 7, 9 and 9 above).

Referring to claim 32, the combination of Apostolopoulos/Leighton/Walker disclose a streaming server according to claim 22 and further disclose the streaming server comprises a memory for storing a set of media streams which are available for transmission in which the same media content has been encoded at different bit rates (Leighton, paragraphs 5, 7, 23 and 26).

Referring to claim 33, the combination of Apostolopoulos/Leighton/Walker disclose a streaming server according to claim 22 and further disclose the streaming server is configured to communicate information on the available set of media streams beforehand to the mobile client device in a streaming session setup (Apostolopoulos, paragraphs 2, 9, and Leighton, paragraphs 23-26).

9. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apostolopoulos et al (US 2003/0009576 A1) in view of Leighton et al (US 2003/0200326 A1) further in view of Walker (WO 02/45372 A2) and further in view of well known prior art (MPEP 2144.03).

Referring to claim 19, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 1.

The combination does not specifically disclose the mobile communications network comprises a mobile packet radio network, such as a General Packet Radio Service network.

The examiner takes official notice of the fact that GPRS networks are well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the combination by incorporating the teachings of well-known art for the purpose of extending the service to larger networks.

Referring to claim 20, the combination of Apostolopoulos/Leighton/Walker disclose the method according to claim 1, and further disclose cell reselection is performed between two base stations (Figures 9-11 and paragraph 10, 141-145, 147, 150 and 155, "handoff the media streaming session to the second base station").

The combination does not disclose base stations belonging to a GPRS system, base stations belonging to a third generation mobile communications system as claimed.

The examiner takes official notice of the fact that handoff or cell selections between different network are conventional in the art e.g., dual and multi mode mobile terminals that are capable of handing off between different networks.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the combination in the format claimed by incorporating the teachings of well known art, for the purpose of providing user convenience.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper, can be reached at (571) 272-7605. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/VINCENT P. HARPER/

Supervisory Patent Examiner, Art Unit 2617